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The impact of institutional voids and ecosystem logics in the spread of ecosystems in emerging economies

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ABSTRACT
Business ecosystems can be formed with the contribution of stakeholders from countries with different conditions. In this research, we investigate how institutional voids and their management impact the spread of business ecosystems with developed market origins in emerging economies. We conduct our analysis on the screen reader ecosystems in Turkey, which characterise the assistive technology industry for the blind. In our abductive study with three screen reader dealers of US-based producers in Turkey, we find that the spread of ecosystems in emerging economies is determined by how ecosystem logics fit with the institutional conditions regardless of the home market dominance of ecosystems, and how different types of institutional voids are effectively addressed by local entrepreneurs.

1. Introduction

Business ecosystems link several actors from different business or institutional roles around a central player or technology which largely defines the logics of co-production of interrelated values, thereby affecting the ecosystem’s relations with the context (Adner 2017; Anderson and Tushman 1990; Goncalves, Da Silva, and Teixeira 2019; Jacobides, Cennamo, and Gawer 2018; Prahalad and Bettis 1986). An ecosystem’s spread that reflects the diffusion or prevalence of the ecosystem’s set of offerings, elements and relationship forms may vary from country to country (Kapoor and Agarwal 2017; Lepoutre and Oguntoye 2018).

Although the ecosystem concept is popular in management research, the international spread of ecosystems is an underexplored issue. According to a general insight which reflects an economic perspective, a market leader (i.e. dominant) ecosystem may be advantageous in international spread since it is attractive because of niche availability, consumer basis and broad business networks (Anderson and Tushman 1990; Autio and Thomas 2014; Ceccagnoli et al. 2012; Gawer 2014; Kang and Downing 2015). On the other hand, the literature lacks an institutional treatment of business ecosystems in terms of their interactions with the macro context. An ecosystem may face different
institutional contexts in different countries, thereby affecting its international spread (Lepoutre and Oguntoyé 2018). The insights obtained from economic studies in favour of dominant ecosystems have been tested in developed economies where there are strong institutions (e.g. Adner and Kapoor 2010; Ceccagnoli et al. 2012; Gaver 2014; Kapoor and Lee 2013). However, with regard to ecosystem spread, we lack understanding of their generalisability to varying institutional environments (Sarma and Sun 2017).

This is an important omission because, institutional variations have the potential to lead into different ecosystem structures and spread outcomes. For example in contrast to developed economies, emerging economies are typically characterised by institutional voids (Khanna and Palepu 2010). This augments the impact of institutional entrepreneurship because of the activities towards filling the gaps in market formation, in turn shaping the institutional context of an industry (Harrison et al. 2018; Mair, Marti, and Ventresca 2012). Furthermore, both preliminary and entrepreneurially shaped institutional differences between countries may favour specific value creation logics such as innovativeness, simplicity or cost leadership (Autio, Kenney, Mustar, Siegel, Wright, 2014; Hannan and Freeman 1984). As a result, the dominant ecosystem in a developed market may give way to another ecosystem in an emerging market context. In order to understand the spread of an ecosystem across borders, it is important to discover the interplay between the ecosystem logics and the management of institutional challenges. At present this gap has not been addressed.

Based on these arguments, our research question is ‘How do institutional voids impact the spread of a business ecosystem in emerging economies?’ Addressing a context-dependence, this question requires an understanding of the processes involved during the ecosystem formation at the time of the spread of an ecosystem in a country with a different environment. Clarifying the institutional conditions affecting an industry and comparing competing firms based on their logics and strategies allow for the identification of the mechanisms underpinning the spread process. Since it enables testing and developing existing theoretical clues on an under-explored concern, we conduct an abductive case study on the assistive technology industry for the blind in Turkey where the US-based dominant and secondary screen reader ecosystems are represented, making it possible to compare the spread differences of these ecosystems (Dubois and Gadde 2014). As an emerging economy, Turkey has strong factor and weak institutional conditions that increase the impact of local actors on shaping the environment (Hoskisson et al. 2013; Mair, Marti, and Ventresca 2012), enabling the analysis of how institutional voids are coped with.

This study not only fills a context gap by investigating why ecosystems may reflect different spreads in specific geographies, but also examines the international spread of ecosystems in terms of its relation with the institutions. In line with this, we suggest that ecosystems operate on a dominant logic which is highly determined by their leaders. The logic outlines the ecosystem’s operating principles, influencing its international spread behaviour based on the interaction with the environment. Besides, institutional variations such as the presence of voids create a condition in favour of specific ecosystem logics, and support institutional entrepreneurship to tailor a new environment for an ecosystem’s spread. In addition to being an expansion on the ecosystem spread literature by focusing on the local players and the effect of institutions as the determinant of spread, this shows that alternative ecosystems may have a chance in succeeding in emerging
economies contrary to the insights obtained from studies conducted in developed economies with an economic orientation. Finally, we support the institutional voids stream by distinguishing between country-level and contingent voids, and discuss why this matters.

2. Literature review

2.1. Ecosystem spread

Ecosystems form through the participation of players from different functions, co-specialised around a central solution or core innovator which orchestrates the entire ecosystem (Autio and Thomas 2014; Iansiti and Levien 2004). They include any entities that contribute to and benefit from the production and delivery of interrelated values, including contextual actors such as financers, economic infrastructure, legal entities, or benefactors of positive externalities within the analysis (Adner and Kapoor 2010; Autio and Thomas 2014; Furr and Shipilov 2018; Jacobides, Cennamo, and Gawer 2018). Ecosystem partners with direct roles in the value production and delivery commit to a logic that is largely maintained by the leader and binds them around the same objective (Goncalves, Da Silva, and Teixeira 2019; Sarma and Sun 2017). The logic determines the principles of co-creation which not only defines the rules of cooperation (Iansiti and Levien 2004; Jacobides, Cennamo, and Gawer 2018; Kapoor and Agarwal 2017), but also affects the environmental fit of the ecosystem value (Hannan and Freeman 1984; Prahalad and Bettis 1986).

An established ecosystem in a country may spread to other countries where its value proposition is not represented. In such environments, a business environment starts to appear around the core ecosystem value, and the novel structure may give rise to different performance outcomes. Current literature views the international spread of ecosystems from the perspective of partner selection of the ecosystem leader (Jones and Pitelis 2015; Sanchez and Ricart 2010). Reflecting this perspective, Rong et al. (2015) propose a process model of internationalisation which begins with creating a friendly environment by communicating with potential partners, continues with selecting key partners, and finalises with integrating partners through a shared vision. Although it is suggested that the success of internationalisation is dependent on how well the local industry architecture is addressed, including the rules, customers’ priorities, and interdependencies with local partners (Parente, Geleilate, and Rong 2018; Tee and Gawer 2009), the mechanism which underlies the spread process and determines the outcome, as well as the role of the local stakeholders, nature of contextual differences and logical fit stay overlooked.

A potentially relevant argument in this consideration is that any firm including international actors should increase its performance through collaboration with dominant or market leader ecosystems. Based on an economic reasoning, belonging to dominant ecosystems are suggested to enable access to large complementor and customer networks (Anderson and Tushman 1990; Lepoutre and Oguntoye 2018), to allow utilising the logics which are proven successful (Hannan and Freeman 1984), and to support controlling the level of uncertainty (Alexy, George, and Salter 2013).
However, generalising such conclusions may be deceptive especially in different or unstable institutional contexts. Working on properly defined markets, scholars tend to approach the problem of ecosystem spread by overlooking the institutional conditions (Rong et al. 2017; Sarma and Sun 2017). Nevertheless, institutions can affect relationship styles, dominant players, transaction costs and the expectations of customers and partners, and can shape different value production or delivery structures during spread (Autio, Kenney, Mustar, Siegel, Wright, 2014; Chen, Liu, and Hu 2016). Such differences create various contingencies, especially in emerging economies, which have yet to be examined (Rong et al. 2017). Hence, the effects of such macro level factors on ecosystem management are promising for research (Huber, Kude, and Dibbern 2017).

2.2. Managing the institutional voids

The institutionalists see the economy as a collection of human-made institutions consisting of belief systems, norms and activities (North 1991), and differences between economies can be understood with respect to the formation of the institutional environment (Hoskisson et al. 2013). As a reflection of this, institutional voids are the fundamental differentiating factor between emerging and developed economies, that is, emerging markets may lack some proper functioning institutions that shape developed markets (Khanna and Palepu 2006, 2010). The voids may be caused by absence, weakness, imperfection or ineffectiveness of institutions forming the market (Rodrigues 2013), including the components such as the legal environment, intermediaries, factor markets or infrastructure (Harrison et al. 2018; Inoue, Lazzarini, and Musacchio 2013; Khanna and Palepu 2010; Luiz and Ruplal 2013). Such problems with the institutional structure cause additional uncertainties in making business, increase costs, and constrain resource access (Ghoul, Guedhami, and Kim 2017). For example, heavy regulations in firm entries and labour markets cause people to oppose internalising formal rules, which increases transaction costs (Doh et al. 2017). Similarly, the radical variations in the quality of educational institutions in India make it harder for multinational firms to access the talent pool as effectively as the local firms (Khanna and Palepu 2006). Not only the absence or inefficiencies, but also the multiplicity of institutions on the same purpose creates voids as they cause conflicts and contradictions (Mair, Marti, and Ventresca 2012). As such problems may result in unexpected relational structures in ecosystem spread, these environments require special consideration, and managing institutional voids through institutional entrepreneurship may affect the spread of ecosystems in emerging economies (Harrison et al. 2018; Rong et al. 2017).

Institutional entrepreneurship literature argues that entrepreneurs may transform the institutional environment with their actions such as bridging diverse stakeholders, introducing new practices and getting others familiarise with these practices at the early phases of institutional change (Chen, Qian, and Narayanan 2017; Maguire, Hardy, and Lawrence 2004). Especially emerging fields require creativity from institutional entrepreneurs, because they need to convince many stakeholders for a purpose without benefiting from established legitimacy (Fligstein 1997). Despite poor market functioning, uncertainty and adaptation concerns (Gubbi, Aulakh, and Ray 2015; Inoue, Lazzarini, and Musacchio 2013), institutional voids perspective considers these challenges as an advantage for the entrepreneurs in emerging economies since voids can
provide opportunities to structure the environment, and local entrepreneurs have the necessary experience and capabilities in such chaotic but familiar environments (Luiz and Ruppl 2013; Mair, Marti, and Ventresca 2012; Tracey and Phillips 2011). The theory identifies a few options which entrepreneurs can follow to strategise on the voids. They either fill the void by undertaking the function of the institution, or create alternative solutions by using substitute institutions (Khanna and Palepu 2010; Tracey and Phillips 2011). They may also create alliance networks to mimic the behaviour of a functioning network, or collaborate with partners from other countries that may undertake the function of the missing institution (Ghoul, Guedhami, and Kim 2017).

Our review indicates that international spread of ecosystems in terms of the role of institutional differences is not well explored. This negligence is important for understanding the required adaptations especially by the local actors, and the factors in predicting likely spread outcomes. The literature also does not explore the relationship between the ecosystem logics and spread to different contexts. In general, institutional examination of ecosystem spread, specifically in terms of the effects of institutional voids in managing ecosystems is lacking. These concentrations may help in explaining the performance differences of the same ecosystem across borders such that an ecosystem might spread better in a different context compared to its dominant rival in the home country. Our paper intends to address these identified concerns.

3. Research setting

3.1. Context

In order to study how ecosystems in an industry spread to different economic contexts, we chose the US as the developed home economy and Turkey as the emerging destination economy. As the biggest economy of the world, the US is the centre for many industries due to economic diversification (Hall and Soskice 2001). It is not uncommon that US-based ecosystems compete in international business, and complementors in other economies participate in US-led ecosystems. On the other hand, Hoskisson et al. (2013) classify Turkey as a rapidly growing emerging economy. It is considered as one of the mid-range economies that represents a condition between newly developed and traditional developing economies with its relatively high well-endowed infrastructure and factor markets, and its inadequate institutional development (Hoskisson et al. 2013; Khanna and Palepu 2010). This makes Turkey an appropriate research context because factor and infrastructure availability reduces the risk of failed competition due to scarcities in essential requirements such as capital, skilled labour or distribution facilities. On the other hand, institutional voids allow tracking entrepreneurial behaviour that may yield unique ecosystem spread outcomes (Mair, Marti, and Ventresca 2012; Wright et al. 2005).

We study our research question in the assistive technology industry, specifically in the ecosystems around the screen reader software that reads aloud text on the screen for the blind. The assistive technology industry delivers specialised solutions for the blind and visually impaired. Screen reader and magnifier software, digital magnifiers, book readers, Braille printers and other such enabling technologies are produced by few SMEs, and distributed globally by local entrepreneurs. The US constitutes the biggest market as the
pioneer country of the industry since the 1980s. It hosts the world’s first and second dominant paid screen reader ecosystems, Jaws for Windows and Window-Eyes, which have various distinct or overlapping stakeholders (Oswal 2014). Competition in the industry also takes place between these ecosystems in most other countries (Brown et al. 2012). We narrowed our focus of analysis to Windows-based paid screen readers, which are not subject to heterogeneous competition dynamics due to non-profit actors. In addition, the same country of origin eliminates the concerns about the home country difference in explaining spread outcomes in destination economies. Therefore, the industry provided us with an opportunity to properly investigate our research question in relevant contexts.

Screen readers are the main assistive technology components as the core accessibility tools for most blind individuals who need a solution for accessing information. They influence the entire industry architecture and competition strategies in the industry, and form ecosystems around them including many stakeholders such as script developers for making 3rd party software accessible, Windows applications, dealers, user communities, financers, complementary assistive technologies, and legal or institutional elements of the country. These elements exist in both ecosystems but evolve via distinct paths. For example, scripts that add functionality to the screen reader are developed in different language platforms, and cannot be converted for rival ecosystems. Jaws places no central control on the scripts while Window-Eyes offers a controlled repository, impacting developer behaviours and the attracted users. On the user groups, high switch costs arise because educational materials, experience sharing, and usage habits diverge the communities. Software and hardware items may only be accessible to one ecosystem. Dealers generally sell only one screen reader, and this choice affects their entire product portfolio. In addition, country-specific conditions affect the diffusion of screen readers by interacting with ecosystem logics. Although there are overlaps among ecosystems due to operating in the same industry, such conditions distinguish between two ecosystems.

In this research, we focus on the entrepreneurs in Turkey who act as dealers within their international ecosystems, but establish the local ecosystem by introducing the core value and setting up links with the stakeholders in the local economy. This choice allows tracking the adaptations for introducing the ecosystems and their spread. Since developing the technology requires large capital and know-how investment, and the customer groups have strong budgetary constraints, the entrepreneurs joined US-based ecosystems for setting up the local industry. In order to respect the entity of the firms and secure the confidentiality of the informants, we refer to the firms as Alpha, Beta and Gamma; and do not disclose informant names. The first firm of the industry, Alpha, was established in 1996 by three family members. It began working with the dominant ecosystem by distributing Jaws for Windows. In 2005, Beta was established by two blind, two visually impaired and one sighted friends who were previously dealing with blindness issues. This entry initiated competition, expanded the market, caused reductions in sales prices, and introduced diversity to product lines. This was a step towards the rise of a non-monopolistic market and introduction of new business practices in Turkey. By the beginning of 2010, Gamma joined the competition as a separation from Beta after three owners of Beta resigned
Table 1. An overview of the market formation.

<table>
<thead>
<tr>
<th>Element</th>
<th>Jaws</th>
<th>Window-Eyes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Est. market status in the US</td>
<td>Dominant with a market share around 80%</td>
<td>Secondary with a market share around 15%</td>
</tr>
<tr>
<td>Emphasised features</td>
<td>Most used, functional superiority</td>
<td>Local fit, customisability</td>
</tr>
<tr>
<td>Distributed by in Turkey</td>
<td>Alpha, Gamma</td>
<td>Beta</td>
</tr>
<tr>
<td>Reason to distribute in Turkey</td>
<td>Superior worldwide sales performance and functional advantages</td>
<td>Exclusivity of Jaws; growth expectations on the forerunner; flexibility for local adaptations</td>
</tr>
<tr>
<td>Distribution years</td>
<td>1999 (for Gamma 2010) onwards</td>
<td>2006 onwards</td>
</tr>
<tr>
<td>Est. market share in Turkey</td>
<td>55–65%</td>
<td>35–45%</td>
</tr>
<tr>
<td>Marketing approach in Turkey</td>
<td>Capitalising on the brand name, benefitting from existing user networks, emphasising innovative functionality</td>
<td>Proactive and firm-centred marketing, emphasising localisation, adaptability and after sales service</td>
</tr>
</tbody>
</table>

due to managerial conflicts. The split intensified competition, and brought new practices such as purchasing from competitors. By 2015, aside from the providers of low-tech solutions such as white canes or talking watches, three firms were competing to distribute assistive technology in Turkey, all taking part in US-based screen reader ecosystems. Table 1, Table 2, Table 3 presents an overview of the ecosystems in Turkey.

The entrepreneur profiles of these three companies do not differ according to many background characteristics including education, relation to the target group, age, prior professional and entrepreneurial experience, social class, relations with the international industrial community, initial financial capital, or technology use. This situation reduces the concerns in individual skills in explaining the performance differences of entrepreneurs.

3.2. Data sources and analysis

We conducted an abductive qualitative case study on the entire local industry to understand how dominant and alternative ecosystems spread in Turkey. On one hand, the impact of business logics and institutions on the ecosystem spread are underexplored. However, our initial review provides a possible framework which might be improved. An abductive case study offers an opportunity to use data to expand theories on an underexplored phenomenon in light of a preliminary reasoning based on a point of departure with a limited theoretical background (Chandler et al. 2019; Danneels 2011; Dubois and Gadde 2002, 2014). With this method, we sharpened our initial observations and reasoning in a framework through continuous iterations between theory and data (Chandler et al. 2019; Dubois and Gadde 2002). Besides, studying multiple firms enabled a comparison between firm strategies, actions and choices in outlining the causes of spread variations of ecosystems across borders (Ozcan and Eisenhardt 2009).
We conducted our study on Turkish firms which are the local dealers of US-based screen readers. Our sources cover all three direct Turkish partners of screen reader ecosystems to get a complete view of the industry. The data covers the period from the establishment of the firms until 2014, which enables us to track the evolutionary process until the spread completes (Danneels 2011). We used several data sources in our analysis to limit informant bias and to increase the confidence of our findings (Ozcan and Eisenhardt 2009).

At the beginning of the data collection, we searched for background information through news articles, product brochures, academic papers, company web pages, and other secondary sources such as third-party survey data. The archives of two popular independent email groups of Turkish blind users where they exchange information about assistive technology were also monitored. This was helpful in developing insights on customer preferences and perceptions. Besides, informal discussions with employees and opinion leaders provided a stronger sense of the industry. Together with the literature, the collected information helped in formulising the questions for the formal stage.

In the first formal stage of the study, we accessed 5 founders from the firms – Alpha 1, Beta 1, Beta 2, Gamma 1 and Gamma 2 – who were still working for their firms at the time of the interviews, and expected to possess the most accurate information about their companies since their founding. A basic questionnaire was prepared to guide the semi-structured interview, and was emailed to the interviewees before meeting to reduce pressure and time spent during the interviews. The questionnaire aimed to gather information about many subjects, including but not limited to, company and product profiles, screen reader logics, competition, marketing, and institutional conditions. During the interviews, additional open questions were asked to discover causal links and underlying logics. The recorded face-to-face meetings took place in Turkish as the mother tongue of the interviewees between June 2015 and February 2016. At this stage, memo creation, coding, and iteration with the theory began.

The collected data indicated that the alternative ecosystem which is formed around Window-Eyes showed a considerably stronger performance in Turkey than the home market. Consistent with an abductive approach, we decided to place more emphasis on its distributor, Beta, to clarify the reasons of this interesting outcome. Since analysing email content provides clues about a firm’s performance and evolution of its market (Yang, See-To, and Papagiannidis 2020), after obtaining permission from the company managers, we accessed Beta’s archived company emails from 2006 to 2013. We recorded our observations on 143 email dialogues which had the potential to improve the analysis of the research question. Being real business data, these emails contained communications between employees of the firm as well as correspondence with outsiders, such as suppliers and customers. The contents ranged from order processes to negotiations or from strategic discussions of employees to managerial instructions about the promotion of a product. They provided information about industry evolution, competitors, and employee ideas about market occurrences. Hence, we sharpened our framework and propositions with real business data, which was not significantly prone to informant biases (Chandler et al. 2019). The data is used to analyse the spread of ecosystems in
Table 2. showing the material used in our analysis is as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>Firm</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Interviews</td>
<td>Alpha</td>
<td>130 Mins/32 pages</td>
</tr>
<tr>
<td></td>
<td>Beta</td>
<td>161 Mins/59 pages, 102 mins/39 pages</td>
</tr>
<tr>
<td></td>
<td>Gamma</td>
<td>97 Mins/44 pages, 94 mins/33 pages</td>
</tr>
<tr>
<td>Reviewed email dialogues</td>
<td>Beta</td>
<td>2912</td>
</tr>
<tr>
<td>Analysed emails</td>
<td>Beta</td>
<td>Memos from 143 email dialogues</td>
</tr>
<tr>
<td>Follow up communications</td>
<td>Alpha</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Beta</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Gamma</td>
<td>3</td>
</tr>
<tr>
<td>Brochures</td>
<td>Alpha</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Beta</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Gamma</td>
<td>7</td>
</tr>
<tr>
<td>Academic articles</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>News articles</td>
<td></td>
<td>11 (7 national + 4 industrial)</td>
</tr>
</tbody>
</table>

Turkey, the behaviour of various ecosystem elements, and the timeline of the industry. The memos from the emails supported the development of the ideas in the results section.

We also contacted the entrepreneurs by email or phone about our follow up questions for 11 times in total. The responses clarified the questions that appeared during the iteration.

As indicated, we used memos while walking through the data during the analysis, which contained brief analytical insights inferred from the raw data (Danneels 2011). As required by an abductive approach, we selectively interpreted the data in terms of our constructs on the spread of ecosystems and their relation to the institutional environment and business logics (Dubois and Gadde 2002). We constantly updated the forming theory with the data, so the data analysis went hand in hand with the data collection (Chandler et al. 2019; Dubois and Gadde 2014). Memos are recorded when the data provided insights about the institutions and ecosystem logics. Besides, the data that included general insights about the research question and important information about the ecosystem spread are also evaluated in separate memos. The memos which relate to the potential theories, or consistently point to the same direction gave rise to the findings discussed in the following sections. The new data that came in the later stages of collection are also used to support or enhance the results. Follow up communications served to clarify the contradictions or ambiguities. As it appeared that Alpha and Gamma did not use conflicting strategies in the spread of the Jaws ecosystem in Turkey, we analysed inputs from these two firms on the same side, which is consistent with the research question that aims to capture the ecosystem behaviour rather than that of the firms.

The following table presents the key concepts and their sources, which are partly derived from the data and partly from published studies (Danneels 2011).

4. Results

This section begins with a description of the US and Turkey regarding the conditions for the assistive technology industry and the screen reader ecosystems, especially in terms of institutional voids in Turkey, which need to be addressed by local entrepreneurs. We then examine how the ecosystem logics, with the involvement of entrepreneurs, interact with the institutional voids to determine spread outcome.
Table 3. presents the key concepts and their sources, which are partly derived from the data and partly from published studies (Danneels 2011).

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominant ecosystem</td>
<td>The term is adapted from the dominant design concept which comes from industry lifecycle literature (Anderson and Tushman 1990) to describe the ecosystems in which the leader firm has a significantly higher market share together with its complementors and network breadth than the rivals. We compare its performance with alternative ecosystems.</td>
</tr>
<tr>
<td>Alternative ecosystem</td>
<td>A fabricated term to address the ecosystems that are not dominant in an industry, binding their complementors within an alternative set of relationships.</td>
</tr>
<tr>
<td>Ecosystem spread</td>
<td>This developed term indicates the diffusion of the ecosystem offerings, formation of the ecosystem roles, and nature of the relationships between actors. As our dependent variable, this is qualitatively evaluated.</td>
</tr>
<tr>
<td>Ecosystem logic</td>
<td>An application of the business logic term coined by Prahalad and Bettis (1986) used to describe the informal principles of ecosystems that the elements must follow. Its interaction with the context and effect on the spread performance are explored.</td>
</tr>
<tr>
<td>Institutional voids</td>
<td>Borrowed from the literature to describe the missing or ill-functioning institutions in emerging economies (e.g. Doh et al. 2017; Khanna and Palepu 2010). Its effect on the spread is explored.</td>
</tr>
<tr>
<td>Flexibility logic</td>
<td>Excerpted from the data; this term describes the adaptability of the ecosystem for the institutional requirements in a country. It refers to the extent to which the ecosystem logic is appropriate for localisations and connecting to stakeholders.</td>
</tr>
<tr>
<td>Functionality logic</td>
<td>Appearing in the data, the ecosystem logic that emphasises the technical orientation of the ecosystem.</td>
</tr>
<tr>
<td>Country-level voids</td>
<td>These institutional voids embed in the entire economy, and can be seen in almost all the industries inside the country. They have more to do with the politics and macro indicators. The concept is derived from Ghouli, Guedhami, and Kim (2017) and sharpened by the data.</td>
</tr>
<tr>
<td>Contingent voids</td>
<td>Defined differently than Rodrigues (2013) and streamlined in the data, contingent voids are institutional voids that are not present in the entire economy, rather, they exist in a specific industry. Such voids are crucial for accessing the target group.</td>
</tr>
</tbody>
</table>

4.1. Institutional void management in Turkey

The US and Turkey have different market conditions in terms of the assistive technology industry, which includes the screen reader ecosystems at the core. In the US, the industry is at maturity with a proper functioning market. The country hosts many producers including the leaders of screen reader ecosystems, whose products are sold all over the world. Competition results in lower prices and innovations. On the customer side, individual purchases account for most sales. The income level of individuals, awareness of their specific needs, and a culture motivating the blind to spend for their needs strengthen the market. Labour force participation is high among the blind, increasing the demand for differentiated solutions. Despite the differences in individual states, assistive technology for the workplace is partly subsidised by the insurance. The coverage of the remaining cost strengthens the users’ bargaining hand against firms. For screen readers, there is a diverse complementor network of script developers and dealers.

On the other hand, Turkish firms did not have the chance to do business with US practices because of institutional voids that require modifications. These voids had to be remediated before preparing the conditions for the diffusion of the ecosystem offering and to establish links with local stakeholders. Areas that are shaped by institutional voids and the attempts of the entrepreneurs to fix them during the spread (which effectiveness of their execution is affected by ecosystem logics as described in section 4.2) are inducted from interviews, emails, and open sources as below.
4.1.1. **Consumer finance**

The purchasing power of consumers in Turkey is around three to four times lower than the US, and prices exceed budget limits of the blind who have higher unemployment rates. The market cannot adjust an efficient price based on individuals’ willingness and reasonable costs, because the entrepreneurs are price takers. This prevents assistive technology consumers from being customers. Furthermore, unlike most developed countries including the US where assistive technology is partly or fully subsidised by various insurance institutions for fostering the individuals’ integration to society, such support is missing in Turkey. The lower per capita income makes this absence more detrimental. Besides, borrowing opportunities as well as the awareness of, and willingness to, use existing finances on the customer side are limited.

The entrepreneurs did not have the power to fill these voids which characterise the entire country environment. Thus they bypassed the improper financial institutions with the alternatives, or included several stakeholders. They redesigned their revenue model in a way to involve the donators, social policy and CSR as alternative institutions, and motivated the state and private firms to provide assistive technology for both individual and public use. Creating bundle packages from several different assistive technologies facilitated this attempt. In the new business model, the purchaser was not the user, and technology packages competed, instead of single items. Thus, inadequate consumer finance was balanced with the involvement of state institutions, municipalities, and donators including NGOs, firms or individuals. For the community, this made possible accessing assistive technology with minimal individual costs.

‘Various big firms in Turkey, say in construction, communications or clothing, (...) to increase their visibility for their own sake, organise social responsibility projects with us. (...) As a result this is one of the fields where we can earn money. Since they spend, we exist in some degree.’ (Gamma 2).

‘What we do is to promote these solutions to the government. Because the state has some political objectives, they need to make their citizens happy and integrate these people. They have financial resources to pay instead of the users.’ (Beta 2)

4.1.2. **User education**

An important difference between the US and Turkey is the education level of users due to the under-utilisation of education institutions in Turkey, which varies consumers across borders (Khanna and Palepu 2010). The Turkish blind and visually impaired community has a lower schooling rate. This affects the socialisation, status, employment and resource access of the target group. In addition, most do not receive any training on accessibility. Fewer consumers know what the technology can offer them. It also has a negative impact on labour force participation, which constrains a consumer’s income and work-related demand.

‘When I was a student ... approximately 50 thousand blind people should have been students. However, if the capacity of the blind schools had been one over 50 of this number, we should have loved this. (...) The others could not benefit from educational opportunities.’ (Gamma 2)
To overcome the voids in education which are of fundamental importance in the spread of the ecosystem value in the target group, the entrepreneurs mobilised existing educational institutions and incentivised NGO’s on blindness to explain the importance of screen readers to their members, which provided mutual opportunities for all involved parties. They also directly taught the technical opportunities of assistive technology and their benefits to the community via free training materials, sponsorships, conferences and advertisements.

‘We invited the CEO of our screen reader, and he provided a ten-day course to the opinion leader blind participants from each region of Turkey.’ (Beta 1)

‘If someone needs to use one of our solutions, we provide the necessary education about it. We supply them with our cards. We share our personal phone numbers. We encourage them to ask any questions when they have.’ (Gamma 1)

### 4.1.3. Application of the Turkish disability law

The integration of the disabled to social life is a big concern, and attracts the attention of decision makers. In 2005, the Turkish government passed legislation to support the disabled with financing, accessibility, and employment. The legislation brought many responsibilities for numerous stakeholders such as the municipalities, state institutions and public service firms. Nevertheless, inefficiencies in its enforcement caused institutional voids (Rodrigues 2013). Many stakeholders could not fulfil the requirements of the law. Reflecting this, the deadline to make the external environment accessible is postponed from 2012 to 2015, and then to 2018.

Although the application of this law which directly concerns the industry was not under the control of entrepreneurs, its application would benefit various stakeholders. Thus, to ensure effective operation of the law, they used their resources to provide guidance to the users about their rights. Besides, they informed the officials and relevant parties with their obligations. They also supported such activities with leveraging their networks to make business based on opportunities provided by law. Such activities not only motivated the diffusion of the screen reader ecosystems through new partnerships and increased demand, but also supported a more inclusive society, preparing positive conditions for further institutional development.

‘The disability legislation is an important step, but many people do not know what to do. We had to warn universities or municipalities about their obligations. Many did not act on their own.’ (Beta 2)

### 4.1.4. Cultural compliance

Both cultures and institutions have shared components such as belief systems or norms, and cultural tools such as languages or analogies also serve as institutional mechanisms in creating legitimacy (Mair and Marti 2009; North 1991). Therefore, cultural elements which constrain market participation also cause institutional voids (Mair and Marti 2009). As users are one step away from foreign developers, the local customer needs, tendencies and demands are not fully reflected in the products. Not only the technical aspects of culture including the languages and local standards such as the keyboard layouts are different, but also other institutional elements of the culture reflect variations. Contents of education,
the dominance of being open to receive support over independent living, and avoidance of the blind to spend on their needs are among such areas creating voids for the technology which is produced in the US. These factors influence what is expected from technology, how technology should be presented, and the tendency to spend money on assistive technology. Without necessary communicational and technological adaptations, the software would not effectively spread and function in the Turkish context.

‘(…) Even if they have money they do not want to spend.’ (Beta 1)

To overcome the industry-specific voids in culture which limit the spread of the value among the target group, Turkish entrepreneurs heavily invested in complete localisation of the software, prepared specific marketing and communication plans, emphasised characteristics relevant to the educational differences such as underlining the advantages of listening over braille, and actively used appropriate cultural elements such as arranging donation campaigns. The adaptations included a full translation of software and supporting documentation in terminology that local customers would understand, a localised marketing plan and reconsideration of the target group that utilises the donation mechanism, software-related adjustments on the product such as keyboard adaptations and inclusion of a Turkish synthesiser to give the impression that the product is produced for Turkish users, and setting up special information exchange facilities such as Turkish email groups. Such activities also helped overcoming the voids in education.

‘We set this target: Regardless of where it is produced, the product should be Turkish just as it is produced in Turkey.’ (Beta 1)

A closer look at these voids and their management demonstrates that institutional voids can be classified as country-level and industry-contingent, and depending on the void type, the strategies to overcome are 1) to fill the void directly, 2) coordinate externals to fill it based on mutual interests, or 3) bypass it by using a different institution. This distinction has implications in establishing an ecosystem and determining an ecosystem’s logical fit in the economy. First, although all discussed voids affect the assistive technology industry, some have a wider scope and are in relation to the entire economy. For example, the consumer finance and insurance systems are affected by financial practices, country-level regulations, and economic development level. They are not specific to an ecosystem, and are experienced by many other industries in the country. Entrepreneurs are unable to fill these country-level voids as they are limited in power. Instead, they use already systematised institutional alternatives or coordinate key stakeholders for overcoming such problems. On the other hand, cultural compliance, application of the disability law and education of the target group are tied to the industry. They do not have to be present for other industries, and are related to specific conditions. Neglecting these voids is not an option, because they were of fundamental importance in making business in the industry, and can constrain the delivery of the core ecosystem value to consumers when they are not addressed. Entrepreneurs should fill or get someone fill these voids which may not affect other industries, thereby not having systematised alternatives since the ecosystem is newly being spread. Therefore, industry contingent institutional voids are filled by entrepreneurs or those coordinated by them, whilst country level voids are avoided by substituting them, or are filled by an external based on mutual interest. The strategies can be bundled in addressing a single void; for instance, while directly investing in education, firms also benefitted from the foundations working in the field.
The effectiveness of these discussed strategies which the entrepreneurs used to overcome the voids does not only depend on their skills and networks, but also are strongly affected by the ecosystem logics as described in the next subsection.

4.2. Impact of ecosystem logics on ecosystem spread

Ecosystem partners such as the dealers, customers, complementary software or script developers are bound by the technology and business logic of the ecosystem. Therefore it provides an input which must be considered during managing the institutional voids. In Table 4, we compare the Jaws and Window-Eyes ecosystem logics directly set by the policies of their producers, Freedom Scientific and GW Micro.

Table 4 shows that Jaws has a business logic that emphasises functional superiority. Supporting as much software as possible, introducing sensational innovations, and offering numerous features in the core product are reflective of this approach. Window-Eyes, on the other hand, is flexibility-oriented. Strong customisability for the user, a flexible scripting platform, ease of localisation, and adaptable features for the comfort of old Jaws users reflect this orientation.

The functionality driven logics work in favour of Jaws to stimulate demand. On top of such superiority, the first mover advantage creates a strong network for the Jaws ecosystem. Consequently, as the below quote shows, Alpha and Gamma leverage the brand strength without heavily investing in many concerns. For example, they coordinate the users to carry on technical support and localisations. Among the identified ecosystem logics, Window-Eyes only has a slight advantage in pricing as a functional element.

‘Well, Jaws sells itself. I mean it has a name. Since it has a well-known name and since it is of good quality, it determines the market as it is known by more people.’ (Gamma 1)

On the contrary, with the solution having functional disadvantages, Beta follows a more proactive approach which is backed by the ecosystem’s flexibility. It seeks ways to spread the technology by making use of supportive material production, script coding, localisation, product education and technical support which are also effective in addressing the contingent voids.

The flexibility of Window-Eyes helps Beta in three ways. First, ecosystem logics shape the product portfolios of the dealers. Window-Eyes does not motivate the dealers to bundle with any specific brand, letting Beta build a rich portfolio consisting of different assistive technologies of various producers in each product category. In the revenue model which

<table>
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<th><strong>Table 4. Ecosystem logics.</strong></th>
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<tr>
<td><strong>Jaws</strong></td>
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<tr>
<td>Exclusivity in dealership</td>
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<tr>
<td>pushing economies of scope</td>
</tr>
<tr>
<td>Innovation orientation</td>
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<tr>
<td>Higher price</td>
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<tr>
<td>Strong compatibility for other programs</td>
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<tr>
<td>Limited and slow localisations</td>
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<tr>
<td>Having dedicated script coding platform</td>
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<td>Decentralised user-provided support</td>
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<td>Focus on becoming a monopoly</td>
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<td>Standardised solutions</td>
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<td>Numerous out of the box features</td>
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appears as a result of institutional voids, screen reader is one of the items in a bundle despite its significance, and is distributed as a companion to other solutions. The strength of the flexible portfolio enables Beta to create competitive bundles, and motivates stakeholder support for overcoming institutional voids by preparing Taylor-made solutions. On the contrary, with its exclusivity and integration policies, the producer of Jaws pushes its distributors to sell its other product lines as well, resulting in a predictable and relatively rigid portfolio.

‘Think about a package. There are various product types on it. And these solutions are satisfactory for the purchaser. Window-Eyes is also in the package. They (customers) tell us that “OK, all of them are good but is it possible to obtain Jaws instead of Window-Eyes?” We tell them why this is not possible, and how Window-Eyes will also address their needs. They make the purchase, maybe with unhappiness at the beginning; but later on, they use and get accustomed to it.’ (Beta 1)

The second angle of flexibility is the localisation capability which enables making any necessary amendments on the software such as disabling unused features, preparing a Turkish interface and compatible background, changing the hotkeys to comply with Turkish keyboards, or country specific script inclusion. Window-Eyes is very flexible for such adaptations which are useful to deal with cultural and educational voids, whilst Jaws has some constraints. Reflecting this, although Alpha begins translation of Jaws two years before Beta, it finalises the process four years later, leading towards a clear differentiation for Window-Eyes.

‘To translate Jaws, it is necessary to know how to use another program. There should be Visual Studio. Plus, it is not enough, for the translation another software is necessary . . . ’ (Alpha 1)

The impact of logic is also observed in the market development approach. Jaws is equipped with the logic of monopolising, which is exemplified by two lawsuits against other screen readers due to claimed copyright infringements. On the contrary, Window-Eyes is designed to transfer users of Jaws. As an example, it offers a keyboard layout that reflects the shortcut keys of Jaws. Beta, as the second mover, promotes this feature to convince users that they would be able to use Window-Eyes as if they were using Jaws. Reducing the switch cost for the Jaws users accounting for the entire market at the beginning is important, and Beta could reduce its costs for addressing the voids in education by free-riding the investments of Alpha, emphasising that the switch would cause no inconvenience or training requirement.

As these explanations show, the functionality and flexibility logics reflect different patterns in affecting ecosystem spread. Functionality such as performance, pricing, innovations, or network effects directly influences consumer choices. As functional characteristics are easy to detect, such products are preferred by firms and consumers. On the other hand, flexibility helps in shaping the ecosystem, and provides space so that entrepreneurs can manage voids. Figure 1 demonstrates this reasoning.

As a result of these interactions between ecosystem logics, entrepreneurial activities and the institutional voids, the spread performance of the dominant and alternative ecosystems in Turkey is not like the US. Although the industry reached maturity, no dominant screen reader ecosystem appeared.

‘I think the industry volume is around 300–400 a year.’ (Alpha 1)
'Our screen reader volume may change due to bulk sale projects. Without these projects concerning hundreds of products, we sold around 150–200 copies a year. (...) Probably 80 out of 100 people are using Jaws in the world. 15% for Window-Eyes and maybe 5% for others. (...) In Turkey the scissors became much smaller. We can talk about 55% (for Jaws) – 45% (for Window-Eyes) sales percentages which are very closer than the world rates.' (Beta 1)

'There are users who coded scripts for Window-Eyes. They use the program, like it, and develop specific software accessible only to Window-Eyes. (...) Screen readers improve the sales of our other products. I mean, as we can provide the screen reader in our packages, other complementary items are also sold. So, our products become known and demanded.' (Beta 2)

Our data indicates that the ecosystem spread in Turkey is quite different than the US. Market institution is backed by donation, cooperation or social policy instruments. Customers become partners by engaging in localisation and education. State and various funders are included as strong elements in the ecosystem, the NGO’s undertake essential functions in remediating the voids, and the universities and municipalities are legally involved. Such relationships reflect specific interdependencies in Turkey context which also result in different clusters of user and partner groups. Consequently, Window-Eyes is estimated to capture one-third to one-half of the market against Jaws. Not only the sales volume, but also the accompanying ecosystem structure on user groups, distribution network and compatibility dimensions do not show a dominant ecosystem in Turkey. Despite being the second mover, being promoted by only one firm against two firms, and its functional disadvantages, Window-Eyes shows a considerably better spread, and the Jaws ecosystem does not dominate the Turkish market as in the US. Thus it appears that functional superiority and dominance of the ecosystem do not guarantee success in emerging economies. The market requires adaptations because of improper functioning institutions. In our case, functional-orientation of the dominant ecosystem puts adaptability at secondary importance. The flexibility of the alternative ecosystem is more effective in managing the institutional voids, making the secondary ecosystem comparatively successful.

4.3. Synthesis

Unlike developed economies, emerging economies have various institutional voids. Although their impact mechanisms are different, two interdependent factors determine the spread outcome of ecosystems in such economies. First, management of the
institutional voids is crucial. We identify three strategies that local entrepreneurs use to manage the voids. First, if they have enough power, they directly fill the institutional void. Second, they convince the capable externals to address the voids based on mutual gains. Third, they simply bypass the void by substituting it with an alternative mechanism. These strategies are dependent on the void types: industry contingent voids are generally filled by the entrepreneur and the ones coordinated by them, and country level voids are either bypassed or filled by an external.

Interacting with the first factor, the second factor influencing an ecosystem’s spread is the ecosystem logic. Driven by the leaders, these logics have effects in two ways regardless of the home market dominance. First, they directly interact with the customer preferences and economic conditions in the emerging economy. Functionality oriented logics such as pricing, innovation orientation or compatibility exemplify this effect. Second, the ecosystem logics moderate the management of institutional voids. Especially flexible logics such as supporting localisations, consumer transfers and customisability equip entrepreneurs with the action space that enables them to develop and implement strategies for mitigating institutional deficiencies.

Figure 2 visualises how an ecosystem’s spread is jointly determined by ecosystem logics and the management of institutional voids as described:

According to our case, the ecosystem spread process follows a specific path. Once the entrepreneurs compare the differences between the environments of the home and local economies in terms of the industry they would represent, they choose ecosystems by considering the availability and functional characteristics of the ecosystem as well as the possibility of achieving a logic-context fit. Next, depending on the selected ecosystem and the information obtained from the initial stage, they develop business models which involve stakeholder selection and the nature of the links. Thus, local entrepreneurs lead the spread by orchestrating the ecosystem in the environment which they are familiar with. At this stage, the ecosystem with a compatible logic and a local partner who effectively manages the institutions better spreads. This is because both factors support the diffusion of a fitting solution to the local conditions. As the institutional voids may require varying links with

![Figure 2. Management of institutional voids.](image)
stakeholders, the country environment may result in different partnership networks than the home country. For example in comparison to the ecosystems in the USA, there are differences in the customers, institutions that provide education to the consumers, financiers, complementary assistive technologies and third-party software vendors in Turkey in terms of who they are or what role they play. Finally, the ecosystem evolves depending on the feedback received from the environment and the ecosystem partners.

5. Discussions

While the industries are becoming global, the core value of an ecosystem and its associated relationship network may spread to a new economy with the involvement of local actors which may reside within different market or institutional conditions. When the spread takes place, the formation of the ecosystem, in other words its elements and relationships may appear differently in the destination country. Responding to the calls of macro level or institutional investigation of ecosystems and the identified weaknesses of the literature on the spread process and the role of local contextualities (Huber, Kude, and Dibbern 2017; Sarma and Sun 2017); this study attributes such spread variations to the institutional differences and the ecosystem’s logic’s relation to the new environment. We observe this outcome because the institutional variations across borders about the law, education, financial infrastructure, cultural elements and alike may change key ecosystem partners and the nature of relationships, creating a different environment for the ecosystem. This novel context makes room for institutional entrepreneurship for shaping the environment, and leads into specific conditions that the ecosystem’s logic can fit in. These factors are so strong that they may affect the spread of the core technology and other ecosystem relations in a way that even the dominant ecosystems of home markets may not reflect the same superior performance in the new destination.

As the context, the study focuses on the instance that an entrepreneur in an emerging economy may act as a partner, such as a distributor of an ecosystem based in a developed economy. This is not a rare case since diverse markets of big economies host many rising industries (Hall and Soskice 2001). International business scholars acknowledge that developed economies have proper institutions which form a functioning market, but the immaturity of such institutions is the fundamental characteristic of emerging markets (Doh et al. 2017; Hoskisson et al. 2013). Our data offers two interacting ways in which the institutional voids impact the spread of ecosystems.

First, institutional voids exacerbate the impact of institutional entrepreneurship in emerging economies since the differences in institutional conditions need to be taken care of during the spread. Existing theory suggests that the institutional voids in emerging economies can either be filled or bypassed (Khanna and Palepu 2010). In addition, networks and collaborations serve to fill these voids (Chang and Hong 2000; Ghoul, Guedhami, and Kim 2017). We sharpen these suggestions, and offer three activity categories: directly filling the voids, coordinating externals, and bypassing by substituting. In determining the strategy, the resources and networks of the entrepreneurs are of utmost importance in the sense that first, if they are powerful, they can fill the void by themselves. Second, in line with their networking power, they coordinate other entities to deal with the void based on mutual gains. The third alternative is to substitute the missing or improper function with another existing institution. These activities are not mutually exclusive, and
multiple strategies can be operationalised on a single void. Besides, the activities are applied according to the level of the voids. Entrepreneurs do business in the fields in which they can address the industry-contingent voids by their resources or coordination efforts. This is because resolving the malfunctioning of such voids is necessary to then deliver the value. On the other hand, entrepreneurs may not have the necessary capacity to deal with the country-level voids that characterise a set of industries on the deep layers of market infrastructure. In this case, they either create alternatives by playing around the void and replacing it with a substitute, or motivate the externals to fill these voids based on mutual gains. The success in application of such strategies influences the spread of ecosystems.

The second way in which the institutional voids affect ecosystem spread is the interaction with ecosystem logics. Driven by their leaders, ecosystems are governed by their dominant business logics that control their operation. The logic keeps the peripheral players in line with the core value, and determines the ecosystem’s fit with the environment based on its relevance with the institutional structure in the level of the country or the industry (Gubbi, Aulakh, and Ray 2015).

Ecosystem logics that emphasise flexibility equip the entrepreneurs with managerial freedom to shape environmental and institutional conditions. Although functionality-driven ecosystem logics directly attract consumer choice, the institutional instability may hinder the delivery and utilisation of the functional value, thereby favouring adaptive logics.

This study has contributions to the ecosystem spread and institutional voids literatures. First, we find that institutional context favours specific ecosystem logics shaped by their leaders, and managing the institutional environment through institutional entrepreneurship affects the spread outcome. This extends the ecosystem spread literature which previously focuses on the home market actors in ecosystem internationalisation, and implies that dominant ecosystems can spread better. Besides, we study how institutions impact ecosystem spread, which was identified as relevant but stayed unexplored. Second, we contribute to the previously loose institutional voids literature by naming three strategies to overcome the institutional voids (i.e. directly filling, bypassing or coordinating), and showing when they are used. In this sense, an important contribution is segmenting the voids (Doh et al. 2017), which have previously been examined at an entire economy level (Ghoul, Guedhami, and Kim 2017; Inoue, Lazzarini, and Musacchio 2013; Mair, Marti, and Ventresca 2012). Institutional analysis can be conducted in a wide or narrow scope, i.e. over country and industry levels (Gubbi, Aulakh, and Ray 2015). Institutions for a well-functioning market may be present in some industries, and lacking in others. This links to strategy selection for institutional entrepreneurship.

In practice, dominant ecosystems are suggested to open doors for big markets, and they attract more participants since their market success reduces uncertainty for the potential stakeholders (Anderson and Tushman 1990; Gawer 2014). However, the losing ecosystems of the battle may still find opportunities as the world consists of varying contexts. The logics of such ecosystems may better address contingencies in other environments. On the contrary, committing to a logic that brings success in the home market may cause inconsistencies between the logic and the context in other countries. Therefore, working with alternative actors may be preferable for the partners in emerging economies provided that their logic is appropriate for the local requirements, or is at least flexible for adaptations. Since flexibility leaves the adaptation to local institutional entrepreneurs, it creates strategising opportunities for obtaining a context fit.
6. Conclusion

This study focuses on the spread of different ecosystems of the same industry across different contexts, especially by highlighting the role of institutions. We suggest that institutional context impacts the common relationship forms, logic-context fit, and business models in general, and leads to different ecosystem spread across borders. In this sense, institutional voids in emerging markets may favour specific ecosystem logics. As the lack of proper institutions empowers entrepreneurs in shaping the environment, their management of institutional voids also affects the ecosystem’s performance. Hence, secondary ecosystems of the home market may take the lead in emerging economies if their logic is more compatible and their local partners effectively manage the institutions. Here flexibility for adaptations may suppress functional superiorities.

The study is subject to limitations. First, this is a single case study on a small industry with qualitative data that incorporates the opinions of informants. Although we accessed real business data to triangulate our findings, the data might be industry-specific and affected by subjective opinions of informants. Another shortcoming is that we only considered the entrepreneurs working as dealers in emerging economies. A forethought is necessary before generalising the findings to other ecosystem roles.

The study opens doors for further research. First, the extent to which the ecosystem leader and the partners determine ecosystem logic can be explored. Furthermore, how the leader changes an ecosystem’s current logic is another interesting related issue. Second, we studied a single instance where the ecosystems were centred in the same developed economy and represented in emerging economies. Different combinations can strengthen the perspective. Third, ecosystem spread to emerging economies can be considered from the perspective of opportunities for potential rent seekers or beneficiaries since Institutional voids in such contexts may create favourable conditions. Finally, how the evolution of institutional structure affects the longevity of the ecosystem remains as an important question.

Disclosure statement

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